



Glenn Research Center



Views of the Future — Laminar Combustion in Microgravity

- ◆ Practical devices such as spark-ignition engines and gas-fired turbines, although highly turbulent in nature, operate in the “laminar flamelet” regime.
 - Improvements in understanding of laminar flame structure, laminar burning velocities, flammability limits, and associated chemical kinetics have a direct impact on turbulence modeling.
- ◆ Present models of these complex systems all rely on data from *laminar systems* to predict vital parameters such as the turbulent burning velocity.
 - Microgravity will provide the benchmark data on laminar combustion systems.